

Maintaining Washington's Roads

PROBLEM STATEMENT

Washington's 80,000 miles of highways, streets, roads, and bridges comprise a transportation investment of over \$100 billion. Maintaining and preserving this network, besides keeping this essential investment functioning, improves its efficiency and its effectiveness.

Current expenditures for maintenance closely track total traffic rather than overall lane miles. For example, although comprising less than 15% of the total transportation infrastructure, state highways carry more than half the total traffic (vehicle miles traveled, or VMT). The state highway system also receives approximately half the total roadway expenditures. County and city roads, on the other hand, make up over 85% of the total lane miles of roadway but carry only 43% of total traffic. Cities and counties receive 51% of total roadway expenditures.

State Highways

The Washington State Department of Transportation (WSDOT) is responsible for over 7,000 miles of highway, and expects to spend \$6.4 billion to maintain that network over the next twenty years. Maintenance and preservation is WSDOT's highest priority, and less than 10% of the state highway network is in poor condition.

City and County Roads

The vast majority (87%) of the 41,000 miles of county-owned roads are rural, and over one-third are unpaved gravel roads. No set standards exist for paving gravel roads.

Cities and towns own a road network of 13,000 lane miles. Most of these roads are urban local streets and arterials. These types of streets often contain other amenities, such as sidewalks, street lights, bicycle lanes, and landscaping. With about 21% of total statewide lane miles, these streets carry 25% of total traffic.

Cities and counties believe that existing funding is inadequate to maintain their networks. Counties, on the average, are able to fund only two-thirds of total roadway maintenance each year, while cities are able to finance only one-third of total maintenance and preservation needs.

Causes of Poor Road Conditions

Weather and usage are the primary contributors to poor road conditions. Most poor roads result from a combination of the two. Other contributing factors include the use of studded tires, greater wear and tear from heavy vehicles such as trucks, and the different standards to which roads are built (state highways are sturdier than local roads).

Maintenance Methods

The two methods of assessing maintenance needs are lowest lifecycle cost and pavement management system. Lowest lifecycle cost looks at the overall lifespan of a road or highway and determines the year in which maintenance and rehabilitation costs are the lowest. Performing maintenance or rebuilding during this year represents an optimal investment. Pavement management uses computerized tracking to determine the pavement types, conditions, and characteristics to determine the optimal maintenance system for each road type. This cost-saving system is used by WSDOT and counties, but not by all cities.

PROPOSED APPROACHES

- **Increase funding:** Used with lowest lifecycle cost methods and pavement management system, this solution would ensure that all roads are maintained to their most economically efficient level, with least damage to vehicles as well as to roadways.
- **Alter user charges for heavy vehicles:** Fees could be based upon the number of axles, axle weight, and the type of road used by these vehicles. Fees could be used to invest in road maintenance or better road construction.
- **Provide freight only lanes:** These lanes could be built to higher standards to withstand heavy trucks.
- **Encourage city-county partnerships:** Combining resources could save money and provide better maintenance.
- **Improve management at utility cuts:** Better planning can avoid repeated construction and pavement deterioration.

EVALUATION

Proposed solutions to the issue of maintenance will be evaluated against the following criteria:

- fixes the most critical problems first
- is cost effective
- produces measurable change
- is acceptable to the public
- is administratively feasible
- maintains or enhances safety